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               RYPSIN)

=> s l1 (P) (anti-oxidant or reducing or chelator or chelated or edta or surfactant)
L2          26 L1 (P) (ANTI-OXIDANT OR REDUCING OR CHELATOR OR CHELATED OR EDTA
               OR SURFACTANT)

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=> d l3 1-22 bib ab

L3   ANSWER 1 OF 22  BIOSIS  COPYRIGHT (c) 2008 The Thomson Corporation  on STN
AN   2007:414974  BIOSIS
DN   PREV200700426144
TI   A pure population of lung alveolar epithelial type II cells derived from
     human embryonic stem cells.
AU   Wang, Dachun; Haviland, David L.; Burns, Alan R.; Zsigmond, Eva; Wetsel,
     Rick A. [Reprint Author]
CS   Univ Texas, Hlth Sci Ctr, Brown Fdn Inst Mol Med Prevent Human Dis, Res
     Ctr Immunol and Autoimmune Dis, 1825 Pressler St, Houston, TX 77030 USA
     rick.a.wetsel@uth.tmc.edu
SO   Proceedings of the National Academy of Sciences of the United States of
     America, (MAR 13 2007) Vol. 104, No. 11, pp. 4449-4454.
     CODEN: PNASA6. ISSN: 0027-8424.
DT   Article
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LA English
ED Entered STN: 8 Aug 2007
Last Updated on STN: 8 Aug 2007
AB Alveolar epithelial type II (ATII) cells are small, cuboidal cells that constitute approximate to 60% of the pulmonary alveolar epithelium. These cells are crucial for repair of the injured alveolus by differentiating into alveolar epithelial type I cells. ATII cells derived from human ES (hES) cells are a promising source of cells that could be used therapeutically to treat distal lung diseases. We have developed a reliable transfection and culture procedure, which facilitates, via genetic selection, the differentiation of hES cells into an essentially pure (> 99%) population of ATII cells (hES-ATII). Purity, as well as biological features and morphological characteristics of normal ATII cells, was demonstrated for the hES-ATII cells, including lamellar body formation, expression of surfactant proteins A, B, and C, a-l-antitrypsin, and the cystic fibrosis transmembrane conductance receptor, as well as the synthesis and secretion of complement proteins C3 and C5. Collectively, these data document the successful generation of a pure population of ATII cells derived from hES cells, providing a practical source of ATII cells to explore in disease models their potential in the regeneration and repair of the injured alveolus and in the therapeutic treatment of genetic diseases affecting the lung.

L3 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:1312194 CAPLUS
DN 146:55493
TI Methods for reducing graft rejection and promotion of graft survival using compositions comprising serine protease inhibitors, such as .alpha.1-anti-trypsin
IN Shapiro, Leland; Lewis, Eli C.; Dinarello, Charles A.
PA The Regents of the University of Colorado, USA
SO PCT Int. Appl., 81pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006133403	A2	20061214	WO 2006-US22436	20060607
	WO 2006133403	A3	20070503		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRAI US 2005-687850P P 20050607
AB The invention provides methods for reducing the risk of a transplant rejection, such as graft rejection, or side-effects thereof, which involve administration of serine protease inhibitor, such as .alpha.1-anti-trypsin, in combination with anti-transplant agents. The invention also provides methods for treating a subject in need of immunotolerance therapy and/or for preserving an explanted organ or non-organ, which involve administration of a compound with .alpha.1-anti-

trypsin-like activity or a compound with serine protease inhibiting activity. The invention relates that immunotolerance therapy is selected from group consisting of reducers of apoptosis production, reducers of cytokine production, reducers of nitric oxide production and a combination thereof.

L3 ANSWER 3 OF 22 MEDLINE on STN
AN 2001087173 MEDLINE
DN PubMed ID: 11111244
TI [Study of the protein profile of the Adele tribe of Togo].
Etude du profil proteique des Adele du Togo.
AU Tete-Benissan A C; Duriez P; Parra H J
CS Laboratoire de microbiologie-biologie cellulaire, Faculte des sciences, Universite du Benin, BP 1515, Lome, Togo.. ateteben@syfed.tg.refer.org
SO Sante (Montrouge, France), (2000 Jul-Aug) Vol. 10, No. 4, pp. 261-6.
Journal code: 9212437. ISSN: 1157-5999.
CY France
DT (COMPARATIVE STUDY)
(ENGLISH ABSTRACT)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA French
FS Priority Journals
EM 200101
ED Entered STN: 22 Mar 2001
Last Updated on STN: 22 Mar 2001
Entered Medline: 18 Jan 2001
AB Plasma proteins provide precise information about the physiological status of an individual. In this study, we compared the plasma protein profiles of 168 individuals from the Adele ethnic group, from an isolated rural area of Togo, with those of 159 individuals from an urban population from the capital, Lome. The Adele villages are located in the Atakora mountains. The subjects were volunteers, all apparently healthy and aged between 18 and 65 years. We separated serum proteins by electrophoresis and identified proteins specific for nutritional, inflammatory and immune status. The Adele significantly higher total serum protein concentrations than the urban individuals, with higher concentrations of a1 globulins (2.35 +/- 0.57 g/L versus 1.94 +/- 0.52 g/L) and g globulins (22.19 +/- 5.67 g/L versus 16.98 +/- 5.23 g/L) and lower concentrations of b globulins (6.83 +/- 1.56 g/L versus 7.34 +/- 1. 52 g/L). The Adele also had lower plasma concentrations of albumin (41.91 +/- 5.74 g/L versus 44.56 +/- 6.32 g/L), tranferrin (2.5 +/- 0.52 g/L versus 3.03 +/- 0.6 g/L), haptoglobin (0.57 +/- 0.59 g/L versus 1.32 +/- 0.89 g/L) and IgA (2.3 +/- 0.89 g/L versus 2.88 +/- 1.12 g/L) and higher plasma concentrations of orosomucoid (0.85 +/- 0.26 g/L versus 0.69 +/- 0.27 g/L); IgG (25.3 +/- 7.11 g/L versus 21. 79 +/- 6.5 g/L) and IgM (4.25 +/- 2.83 g/L versus 2.25 +/- 1.0 g/L). The data obtained for the Adele and urban populations were similar to those obtained for European populations except for IgM (higher in the Adele than in the urban and European populations), IgG and CRP (higher for the Adele and urban populations than for European populations). Nutritional status, as estimated by albumin and transferrin concentrations, was higher in the urban population of Lome than in the Adele population but the Adele population suffered no malnutrition problems. These results are consistent with those of a previous study, using apo A-I concentrations as an index of nutritional status. Apo A-I has also been shown to be a reliable indicator of nutritional status, as prealbumin concentration alone is sufficient for the early diagnosis of protein malnutrition. The very high concentrations of plasma CRP obtained indicate the presence of an inflammatory syndrome in the Adele and urban populations, as this protein is the first acute phase protein to be detected. However, the orosomucoid concentrations

obtain-ed provide no evidence of significant inflammation. The high affinity of haptoglobin (Hp) for hemoglobin (Hb) results in the formation of soluble Hp-Hb complexes, reducing the value of Hp as a marker of the acute phase of inflammation. The frequency os sickle cell disease was higher in the Adele population than in the urban population (10-25% versus 2-6%). Hemoglobinopathies are correlated with haptoglobin concentration and thus plasma haptoglobin concentration was lower in the Adele population than in the urban population. The plasma concentrations of a1-antitrypsin in this study were similar to those reported for Europeans. The plasma concentration of protease inhibitors, such as a1-antitrypsin, increased as protease levels increased. These data confirm that the Adele and urban populations suffer no disease due to high levels of protease release into the bloodstream. They also show that a1-antitrypsin is of some value as an acute phase marker protein. The acute nature of the inflammatory syndrome (as assessed by CRP concentration) in the Adele and urban populations was confirmed by the hyperglobulinemia (high levels of production of IgM and IgG antibodies) observed in these populations. The Adele and Lome urban populations live in a tropical environment in which they are continuously in contact with infectious agents. This results in repeated stimulation of the immune system in both these populations. This study of plasma proteins in the Adele provides insight into the physiological conditions of this ethnic group, w

L3 ANSWER 4 OF 22 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
AN 1995006903 EMBASE
TI Alterations in L-selectin expression and elastase activity in neutrophils from patients receiving granulocyte colony-stimulating factor alone or in conjunction with high-dose chemotherapy with autologous bone marrow transplantation.
AU Rao, K.M.K., Dr. (correspondence); Currie, M.S.; Cohen, H.J.; Peters, W.P.
CS VA Medical Center, Box 182A, Durham, NC 27705, United States.
SO Lymphokine and Cytokine Research, (1994) Vol. 13, No. 6, pp. 383-390. ISSN: 0277-6766 CODEN: LCREEY
CY United States
DT Journal; Article
FS 016 Cancer
025 Hematology
026 Immunology, Serology and Transplantation
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 25 Jan 1995
Last Updated on STN: 25 Jan 1995
AB We determined L-selectin expression and elastase levels in neutrophils obtained from patients receiving granulocyte colony-stimulating factor (G-CSF) either alone (given for increasing peripheral progenitor cells for harvest) or in combination with high-dose chemotherapy with autologous bone transplantation support (BMT). Administration of G-CSF alone for 3-5 days produced a decrease in L-selectin expression in neutrophils (25 ± 4 versus 7 ± 1, mean ± SEM; mean channel fluorescence, n = 10) with no effect on neutrophil elastase activity (3.1 ± 0.3 versus 3.4 ± 0.6; μg elastase/million cells; n = 9). In contrast, in patients in the BMT group the L-selectin expression was increased (26 ± 2 versus 38 ± 3; n = 20) and elastase activity was markedly decreased (2.9 ± 0.2 versus 1.4 ± 0.2, n = 12) compared with values before BMT. The changes in L-selectin expression correlated with the ability of neutrophils to adhere to human umbilical vein endothelial cells. The decrease in the neutrophil elastase activity was not associated with an increase in the

plasma elastase/.alpha.(1)-anti-
trypsin complex levels, indicating that the decrease in the neutrophil elastase activity is not caused by activation of neutrophils and release of the enzyme into the plasma. Administration of G-CSF alone did not cause a decrease in the neutrophil elastase activity but increased plasma elastase/α(1)-antitrypsin complex levels. There was no change in CR3 expression on neutrophils under any of these conditions. These observations suggest that the changes seen in neutrophils during BMT are influenced by various factors associated with BMT other than the administered cytokine alone. Perhaps production of endogenous cytokines plays an important role in these changes. Understanding these molecular changes and the roles played by various factors in these changes is essential for devising methods for reducing the toxicity associated with treatment protocols using various biologic modifiers.

L3 ANSWER 5 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1984:343169 BIOSIS
DN PREV198478079649; BA78:79649
TI EOSINOPHIL MEDIATED INJURY TO LUNG PARENCHYMAL CELLS AND INTERSTITIAL MATRIX A POSSIBLE ROLE FOR EOSINOPHILS IN CHRONIC INFLAMMATORY DISORDERS OF THE LOWER RESPIRATORY TRACT.
AU DAVIS W B [Reprint author]; FELLS G A; SUN X-H; GADEK J E; VENET A; CRYSTAL R G
CS ROOM 6D06, BUILDING 10, NATIONAL INSTITUTE OF HEALTH, BETHESDA, MD 20205, USA
SO Journal of Clinical Investigation, (1984) Vol. 74, No. 1, pp. 269-278. CODEN: JCINAO. ISSN: 0021-9738.
DT Article
FS BA
LA ENGLISH
AB Eosinophils are a common component of the inflammation of the lower respiratory tract that characterizes the interstitial lung disorders. Bronchoalveolar lavage analysis (n = 680) of 251 patients with interstitial lung disease demonstrated that eosinophils represented > 5% of the effector cells comprising the alveolitis in 20% of all lavages. Lavage of normal individuals (n = 117) showed that eosinophils were never > 5% of the total effector cells recovered. To evaluate a possible role for eosinophils in mediating some of the cellular and connective tissue matrix derangements of the lung parenchyma found in interstitial disease, eosinophils were evaluated for the presence of proteases capable of cleaving connective tissue proteins found in the lung and for the ability to mediate cytotoxicity to lung parenchymal cells. Evaluation of guinea pig and human eosinophils demonstrated that eosinophil granules contained a collagenase that specifically cleaved human collagen types I and III, the 2 major connective tissue components of the human lung parenchyma. In contrast, the eosinophil did not contain an elastase or a nonspecific neutral protease. The eosinophil collagenase appeared to be a metalloprotease, as it was inhibited by EDTA but not by phenylmethanesulfonyl-fluoride or α1-antitrypsin. The eosinophil also has the capacity to injure lung parenchymal cells. Without further stimulation, eosinophils purified from peritoneal exudates of guinea pigs demonstrated spontaneous cytotoxicity for human lung fibroblasts (HFL-1), cat lung epithelial cells (AK-D) and rat lung mesothelial cells (I6B). Under identical conditions, the epithelial cells were more sensitive to eosinophil-mediated cytotoxicity than the fibroblasts or mesothelial cells ($P < 0.01$), consistent with the clinical observation that in the interstitial disorders, the alveolar epithelial cells are damaged more commonly than fibroblasts or pleural cells. The eosinophil-mediated cytotoxicity could be partially inhibited by the antioxidants catalase and dimethylsulfoxide, suggesting that toxic oxygen radicals play a role in mediating the cellular damage. Importantly, eosinophils purified from

bronchoalveolar lavage of human interstitial lung disease also demonstrated spontaneous cytotoxicity for lung epithelial cells. Eosinophils are frequent participants of the alveolitis of the interstitial lung disorders, and these cells have the potential to damage the parenchymal cells and collagen matrix of the lower respiratory tract.

L3 ANSWER 6 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1984:218596 BIOSIS
DN PREV198477051580; BA77:51580
TI CLEAVAGE OF MEMBRANE BOUND COMPLEMENT C-3B AND INACTIVATED COMPLEMENT C-3B BY VIABLE HUMAN NEUTROPHILS POLYMORPHONUCLEAR LEUKOCYTES.
AU GAITHER T A [Reprint author]; HAMMER C H; GADEK J E; KATUSHA K; SANTAELLA M; FRANK M M
CS LAB CLIN INVEST, NATL INST ALLERGY AND INFECT DIS, NATL INST HEALTH, BETHESDA, MD 20205, USA
SO Molecular Immunology, (1983) Vol. 20, No. 6, pp. 623-636.
CODEN: MOIMD5. ISSN: 0161-5890.
DT Article
FS BA
LA ENGLISH
AB Cleavage of C3 [complement component 3] by purified leukocyte enzymes and crude extracts of human polymorphonuclear leukocyte (PMN) granules is reported. Viable PMN mediate the cleavage of erythrocyte-bound C3b and C3bi [inactivated C3b] via cell-associated proteases. Greater than 50% of 125IC3(x) was released from EAC43bix [sheep erythrocytes sensitized with rabbit IgM anti-Forssman antibody and bearing the major fragments of C4 and inactivated C3b] during a 5-min incubation with viable PMN at 37° C. More than a 30-min incubation was required for substantial release from EAC43bx. Culture fluids from PMN suspensions had limited cleaving ability; cleavage of cell-bound C3bx and C3bix was only partially reduced when PMN were preincubated with high levels of soluble C3 which completely blocked EAC43b rosettes. Cell-to-cell contact between opsonized erythrocytes and viable PMN with surface-associated proteases are responsible for cleavage of these opsonic sites. The effect of defined protease inhibitors on PMN cleaving activity and on purified leukocyte elastase was examined. Phenylmethylsulfonyl fluoride (PMSF) and the leukocyte elastase inhibitor, methoxy-succinate-alanine-alanine-valine-chloromethyl ketone (MeO) each inhibited cleavage of C3b by 90% and C3bi by 60%. The cathepsin-G inhibitor, benzyloxy-carbonyl-glycine-leucine-phenylalanine-chloromethyl ketone (Z) inhibited C3b and C3bi cleavage by < 20 and < 5%, respectively. EDTA, which had a minimal effect on soluble leukocyte elastase, also inhibited PMN-related release. Elastase appeared to be the principle but not the only enzyme responsible for cleavage of C3b and C3bi. PMSF and MeO had a minimal effect on the activity of purified C3bINA (Factor I); and PMN-mediated release of C3b fragments was not inhibited by anti-Factor I and anti-β1H (Factor H) IgG and Fab. These control proteins are not involved in the PMN-mediated cleavage under study. PMN-mediated cleavage of C3b was also inhibited when PMSF- and MeO-treated PMN were washed to remove the fluid phase protease inhibitors before adding EAC43b. Proteases localized in the PMN membrane, prior to adherence of EAC43b, are probably responsible for C3b cleavage. Normal human serum was effective in blocking PMN-mediated release activity, while serum from α1 antitrypsin-deficient patients was minimally effective. This suggests a mechanism for the in vitro regulation of PMN-mediated release of C3b and C3bi from opsonized particles by the natural plasma protease inhibitors.

L3 ANSWER 7 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1983:321093 BIOSIS
DN PREV198376078585; BA76:78585
TI LECITHIN SPHINGOMYELIN RATIO BIOCHEMICAL AND CLINICAL CHANGES AFTER

RITODRINE INTRA VENOUS INFUSION.
AU TZAFETTAS J M [Reprint author]; ZURNATZI V; PAPALOUCAS A C
CS 32 AGIAS SOFIAS ST, THESSALONIKI, GREECE
SO European Journal of Obstetrics and Gynecology and Reproductive Biology, (1983) Vol. 14, No. 6, pp. 357-364.
CODEN: EOGRAL. ISSN: 0301-2115.
DT Article
FS BA
LA ENGLISH
AB The effects of ritodrine hydrochloride on the L/S [lecithin/sphingomyelin] ratio, the clinical and biochemical status of the mother, and the amniotic fluid were studied in a total of 46 women between the 28th and 35th wk of their pregnancy. An increase in the L/S ratio and creatinine levels in the amniotic fluid, significant changes in the maternal serum levels of K, Na, α1-antitrypsin and glucose were found, whereas the urea levels remained unchanged. Maternal hyperglycemia and hypokalemia in both maternal serum and amniotic fluid, were more pronounced when the ritodrine was infused in 5% dextrose. The findings from monitoring the cardiovascular systems of both mother and fetus agreed with previous reports. Ritodrine hydrochloride has a positive effect on the fetal lung maturation, probably by accelerating the release of surfactant. Its administration, however, should be under laboratory control.

L3 ANSWER 8 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1983:284730 BIOSIS
DN PREV198376042222; BA76:42222
TI EFFECT OF CONTRYKAL ON THE BLOOD ACTIVITY OF PROTEOLYTIC ENZYMES AND THEIR INHIBITORS BRONCHO ALVEOLAR SECRETION AND LUNG AFFECTION IN DYSENTERIC INTOXICATION.
AU PROTSENKO V A [Reprint author]; OPRYSHKO V V; NESTEROV E N; BOGADEL'NIKOV I V; KHARCHENKO V Z; SHAEVSKII D V; DOTSENKO S M; KRIVOSHEIN YU S
CS DIV PATHOL PHYSIOL PATHOL ANAT, MED FAC, CRIME MED INST, SIMFEROPOL, USSR
SO Farmakologiya i Toksikologiya (Moscow), (1981) Vol. 44, No. 5, pp. 589-593.
CODEN: FATOAO. ISSN: 0014-8318.
DT Article
FS BA
LA RUSSIAN
AB The development of dysenteric intoxication in rabbits led to an abrupt increase in the activity of blood proteolytic enzymes. This increase was accompanied by a reduced content of α1-antitrypsin and of rapid and slow kallikrein inhibitor. Concomitantly, there was a remarkable decrease in serum chymotrypsin- and kallikrein-binding activity and a diminution of the α2-macroglobulin level. Serum trypsin-binding activity did not substantially change. The permeability of pulmonary vessels rose drastically and the surfactant level of bronchoalveolar lavage fluid decreased. The pathomorphological alterations in the lungs corresponded with the appearance of shock lung. Contrykal normalized the content of proteolytic enzymes and inhibitors in the blood and bronchoalveolar fluid and averted the development of gross pathomorphological alterations but exerted no appreciable effect on the surfactant activity of the bronchoalveolar lavage fluid.

L3 ANSWER 9 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1981:272171 BIOSIS
DN PREV198172057155; BA72:57155
TI SOME PROPERTIES OF NEUTRAL PROTEINASES FROM LYSOSOMES OF RABBIT POLYMORPHONUCLEAR LEUKOCYTES.
AU BRITZ M L [Reprint author]; LOWTHER D A
CS SCH MICROBIOL, UNIV MELBOURNE, PARKVILLE, VIC 3052, AUST
SO Australian Journal of Experimental Biology and Medical Science, (1981)

Vol. 59, No. 1, pp. 63-76.
CODEN: AJEBAK. ISSN: 0004-945X.
DT Article
FS BA
LA ENGLISH
AB Neutral proteinases capable of degrading proteoglycan were found in lysosomes of rabbit polymorphonuclear leukocytes extracted with 0.01 M citric acid. Esterase activity against an elastase substrate was also present but chymotrypsin- and trypsin-like activities were not detected; azocasein-degrading activity was poor. Proteoglycanase activity was stimulated by high concentrations of salts (0.2 M KCl) and divalent cations (Ca, Mg, Mn, Zn) but was inhibited by Cu2+. Elastase activity was also stimulated by high ionic strength buffers and KCl, but not as much by divalent cations, and was inhibited by Cu2+. Proteoglycanase in crude extracts was inhibited by EDTA, phenylmethanesulfonylfluoride, cell cytosol, α1-antitrypsin, gold thiomalate and N-acetyl-di-L-alanyl-L-propylyl-L-valine chloromethyl ketone. Partial inhibition by N-α-p-tosyl-L-lysine chloromethyl ketone and L-1-tosylamide-2-phenylethyl chloromethyl ketone occurred. Elastase adsorbed to CM-cellulose and was eluted by 0.6-0.7 M NaCl; a metallo-proteinase failed to adsorb completely but was retarded by the CM-cellulose. Isoelectric focusing showed that the major proteinases had pI of 5.5, 8.5 and 9.1; the activity with pI 8.5 was a metallo-proteinase, and the pI 9.1 activity was an elastase. The apparent MW of the elastase, determined on Sephadex G-100, was 8000-11,000 daltons.

L3 ANSWER 10 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1981:173085 BIOSIS
DN PREV198171043077; BA71:43077
TI PREVENTION OF DEGRADATION OF HUMAN POLYMORPHONUCLEAR LEUKOCYTE PROTEINS BY DFP.
AU AMREIN P C [Reprint author]; STOSSEL T P
CS HEMATOL-ONCOL UNIT, MASS GEN HOSP, BOSTON, MASS 02114, USA
SO Blood, (1980) Vol. 56, No. 3, pp. 442-447.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Article
FS BA
LA ENGLISH
AB Proteases can complicate the characterization of proteins from cells, especially human polymorphonuclear leukocytes (PMN), which contain abundant neutral proteases. The ability of agents to inhibit proteolysis, with special reference to the subunit polypeptides of the contractile proteins actin, myosin and actin-binding protein (ABP), were tested. Phenylmethylsulfonyl fluoride (PMSF), O-phenanthroline, EGTA [ethyleneglycol-bis(β-aminoethyl ether)-N,N,N',N'-)tetraacetic acid] EDTA, N-ethylmaleimide, alone or in combinations, failed to prevent extensive proteolysis of the PMN proteins during solubilization of cells with dodecyl sulfate. These inhibitors and α-1-antitrypsin and soybean trypsin inhibitor similarly could not prevent proteolysis during homogenization of cells in cold isosomolar sucrose. Treatment of PMN with ≥ 0.5 mM DFP prior to solubilization or homogenization markedly inhibited proteolysis. PMSF and DFP were equally effective in inhibiting proteolysis in PMN extracts, suggesting that the efficacy of DFP may result from its permeation of intact cells and granules before barriers are disrupted by detergents or homogenization. Treatment of PMN with DFP under conditions inhibiting proteolysis did not affect their rate of phagocytosis. DFP should be used in future studies correlating functions and protein structure of PMN.

L3 ANSWER 11 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

STN
AN 1981:217121 BIOSIS
DN PREV198172002105; BA72:2105
TI SOLUBLE FIBRIN COMPLEXES AND FIBRINOGEN HETEROGENEITY IN DIABETES MELLITUS.
AU TSIANOS E B [Reprint author]; STATHAKIS N E
CS PROF UNIT, EVANGELISMOS HOSP, ATHENS 140, GREECE
SO Thrombosis and Haemostasis, (1980) Vol. 44, No. 3, pp. 130-134.
CODEN: THHADQ. ISSN: 0340-6245.
DT Article
FS BA
LA ENGLISH
AB Blood coagulation mechanisms may be important in the development of vascular complications of diabetes melitus (DM). The presence of soluble fibrin complexes (SFC), fibrinogen heterogeneity and the concentrations of several plasma proteins were evaluated in 39 patients with DM and 19 matched control subjects. A small but significant increase of SFC was found in DM ($P < 0.01$). On individual basis 51.2% of the patients had increased SFC (> M + 2 SD of the controls). Polyacrylamide gel electrophoresis of the SFC showed no evidence of cross-linking or proteolysis. Plasma clots formed in the presence of EDTA and trasylol were analyzed in SDS-polyacrylamide gels in a normal and 2 lower MW fibrin bands (band I, II, III). The percentage of band I fibrinogen was in diabetics (65.3 ± 4.7%) lower than that of the controls (71.8 ± 4.5%) ($P < 0.01$). Fibrinogen levels, antithrombin III, α1-antitrypsin, α2-macroglobulin and plasminogen were significantly increased in DM. Apparently, there is an enhancement of intravascular fibrin formation and accelerated fibrinogen degradation to lower MW forms in DM.

L3 ANSWER 12 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 1
AN 1980:265599 BIOSIS
DN PREV198070058095; BA70:58095
TI DATA ON THE PROTEOLYTIC ENZYME SYSTEM OF LERNAEA-CYPRINACEA.
AU JUHASZ S [Reprint author]; GALFI P; MOLNAR K
CS HUNGARIA KRT 32, 1143 BUDAPEST, HUNG
SO Acta Veterinaria Academiae Scientiarum Hungaricae, (1980) Vol. 28, No. 1, pp. 57-70.
CODEN: AVASAX. ISSN: 0001-7205.
DT Article
FS BA
LA ENGLISH
AB Extracts of the copepod Lernaea showed proteolytic activity when tested on Hb, casein and gelatine substrates. Assay on BAEE [N-α-benzoyl-L-arginine ethyl ester hydrochloride] and TAME [N-α-toulene-4-sulphonyl-L-arginine methyl ester hydrochloride] substrates revealed a marked esterolytic action, while that on BAPNA [N-α-benzoyl-DL-arginine-4-nitroanilide-hydrochloride], a less pronounced amidase-like action. No BTEE [N-benzoyl-L-tyrosine ethyl ester]-splitting action was demonstrable. On chromatographic purification of the extract on Sephadex G-75 column, the enzyme activity was associated with a single fraction, of 14,000 MW. The enzyme activity had its peak at pH 9.0 in Tris-HCl, phosphate and borate buffers alike. The Km of the Lernaea protease was 6.8 + 10-6 M, its temperature optimum as 70° C. Ca^{2+}, Mg^{2+} and Zn^{2+}, as well as PCMBA and fish serum (trypsin inhibitor) had no influence on the enzyme activity, while Co^{2+} and Mn^{2+} increased it, and EDTA, DFP [diisopropylfluorophosphate], TLCK [1-chloro-3-tosylamido-7-amino-2-heptanone], soybean trypsin inhibitor and Ascaris suum trypsin inhibitor depressed it to different degrees. The Lernaea protease seems to be a trypsin-like enzyme.

L3 ANSWER 13 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1979:232326 BIOSIS
DN PREV197968034830; BA68:34830
TI COMPLEMENT COMPONENTS AND COMPLEMENT ACTIVATION IN ACUTE POST STREPTOCOCCAL GLOMERULO NEPHRITIS.
AU SJOHOLM A G [Reprint author]
CS INST MED MICROBIOL, SOLVEGATAN 23, S-223 62 LUND, SWED
SO International Archives of Allergy and Applied Immunology, (1979) Vol. 58, No. 3, pp. 274-284.
CODEN: IAAAAM. ISSN: 0020-5915.
DT Article
FS BA
LA ENGLISH
AB Serial samples from 40 patients with acute poststreptococcal glomerulonephritis (AGN) were studied. Early in the disease, all patients showed decreased C3 [complement component 3], and C5 and/or properdin values were low in 91%. The concentrations of C1q, C1s, C2, C4 and factor B were largely normal or increased. Concluding from determinations of C-reactive protein, orosomucoid and α1-antitrypsin, C component levels were influenced by an acute-phase reaction related to infection preceding AGN. Increased amounts in serum of α2-complexes composed of C1r, C1s and C.hivin.1 inactivator proteins in 83% and moderately reduced C2 in 23% of the patients gave evidence of classical pathway activation during the early phase of AGN. Early in the disease, C3-cleaving activity in serum was found in 72%. The activity was heat-labile and produced C3 cleavage in serum chelated with Mg2+ EGTA [ethylenebis (oxyethylenenitrilo) tetraacetic acid] and in some cases also in the presence of EDTA. C activation early in AGN proceeds mainly by an alternative pathway mechanism. In 2 patients, activation of the classical pathway occurred fairly late in the disease and was then associated with the transient appearance of heat-stable C3-cleaving activity in serum. Serial measurements of C1q-binding substances were not clearly informative as to the role of circulating immune complexes in AGN.

L3 ANSWER 14 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1979:152888 BIOSIS
DN PREV197967032888; BA67:32888
TI HUMAN LEUKOCYTE NEUTRAL PROTEASES WITH SPECIAL REFERENCE TO COLLAGEN METABOLISM.
AU KOBAYASHI S [Reprint author]; NAGAI Y
CS DEP TISSUE PHYSIOL, MED RES INST, TOKYO MED DENT UNIV, KANDA-SURUGADAI, CHIYODA, TOKYO 101, JPN
SO Journal of Biochemistry (Tokyo), (1978) Vol. 84, No. 3, pp. 559-568.
CODEN: JOBIAO. ISSN: 0021-924X.
DT Article
FS BA
LA ENGLISH
AB Three different types of neutral proteases related to collagen metabolism were found in the granule fraction of human leucocytes from normal adults, using collagen, gelatin and synthetic peptides as substrates. These are collagenase; an enzyme showing a potent hydrolytic activity against gelatin but little against native collagen; and 1 splitting the cross-links region of collagen. Their MW were estimated to be about 75,000, 150,000 and 25,000, respectively, by gel chromatography. The 1st 2 enzymes were inhibited by a α2-macroglobulin and EDTA, but not by α1-proteinase inhibitor (α1-antitrypsin) or phenylmethylsulfonylfluoride, while the 3rd enzyme, associated in behavior with an enzyme hydrolyzing succinyl-(L-alanyl)3-p-nitroanilide, was

inhibited by α1-proteinase inhibitor, α2-macroglobulin and phenylmethylsulfonylfluoride, but not by EDTA. A possible cooperative function of these enzymes in collagens catabolism is discussed.

L3 ANSWER 15 OF 22 MEDLINE on STN DUPLICATE 2
AN 78123658 MEDLINE
DN PubMed ID: 204294
TI Purification, characterization and inhibition of human skin collagenase.
AU Woolley D E; Glanville R W; Roberts D R; Evanson J M
SO The Biochemical journal, (1978 Feb 1) Vol. 169, No. 2, pp. 265-76.
Journal code: 2984726R. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197804
ED Entered STN: 14 Mar 1990
Last Updated on STN: 14 Mar 1990
Entered Medline: 26 Apr 1978
AB 1. The neutral collagenase released into the culture medium by explants of human skin tissue was purified by ultrafiltration and column chromatography. The final enzyme preparation had a specific activity against thermally reconstituted collagen fibrils of 32mug of collagen degraded/min per mg of enzyme protein, representing a 266-fold increase over that of the culture medium. Electrophoresis in polyacrylamide disc gels showed it to migrate as a single protein band from which enzyme activity could be eluted. Chromatographic and polyacrylamide-gel-elution experiments provided no evidence for the existence of more than one active collagenase. 2. The molecular weight of the enzyme estimated from gel filtration and sodium dodecyl sulphate/polyacrylamide-gel electrophoresis was approx. 60000. The purified collagenase, having a pH optimum of 7.5-8.5, did not hydrolyse the synthetic collagen peptide 4-phenylazobenzyloxycarbonyl-Pro-Leu-Gly-Pro-d-Arg-OH and had no non-specific proteinase activity when examined against non-collagenous proteins. 3. It attacked undenatured collagen in solution at 25 degrees C, producing the two characteristic products TC(A)((3/4)) and TC(B)((1/4)). Collagen types I, II and III were all cleaved in a similar manner by the enzyme at 25 degrees C, but under similar conditions basement-membrane collagen appeared not to be susceptible to collagenase attack. At 37 degrees C the enzyme attacked gelatin, producing initially three-quarter and one-quarter fragments of the alpha-chains, which were degraded further at a lower rate. As judged by the release of soluble hydroxyproline peptides and electron microscopy, the purified enzyme degraded insoluble collagen derived from human skin at 37 degrees C, but at a rate much lower than that for reconstituted collagen fibrils. 4. Inhibition of the skin collagenase was obtained with EDTA, 1,10-phenanthroline, cysteine, dithiothreitol and sodium aurothiomaleate. Cartilage proteoglycans did not inhibit the enzyme. The serum proteins alpha(2)-macroglobulin and beta(1)-anti-collagenase both inhibited the enzyme, but alpha(1)-anti-trypsin did not. 5. The physicochemical and enzymic properties of the skin enzyme are discussed in relation to those of other human collagenases.

L3 ANSWER 16 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1979:151581 BIOSIS
DN PREV197967031581; BA67:31581
TI DISEASE OF HYALINE MEMBRANES IN NEW BORN BABIES IDIOPATHIC RESPIRATORY DISORDER SYNDROME IN NEW BORNS.
AU BUBNOVA N I [Reprint author]
CS DIV PATHOL ANAT, IM SECHENOV FIRST MOSC MED INST, MOSCOW, USSR

SO Arkhiv Patologii, (1978) Vol. 40, No. 4, pp. 79-85.
CODEN: ARPTAF. ISSN: 0004-1955.
DT Article
FS BA
LA RUSSIAN
AB A review of literature on the morphology and pathogenesis of hyaline membrane disease [HMD] in children is presented. Predisposing factors in disease development such as inheritance, perinatal asphyxia, prematurity of newborns, diabetes in the mother and cesarean section are analyzed. The results of EM, immunohistochemical and dynamic histological examinations of the lungs in HMD are presented. Concepts on the association of this disease with a deficiency of a surfactant, α1-antitrypsin, hypoperfusion and reduction of fibrinolytic activity of the lung tissue, and with the vegetative nervous system condition are discussed.

L3 ANSWER 17 OF 22 EMBASE DUPLICATE 3
AN 1978181646 EMBASE
TI Reaction of the basic trypsin inhibitor from bovine pancreas with the chelator-activated 7S nerve growth factor esteropeptidase.
AU Au, A.M.J.; Dunn, M.F.
CS Dept. Biochem., Univ. California, Riverside, Calif. 92521, United States.
SO Biochemistry, (1977) Vol. 16, No. 18, pp. 3958-3966.
ISSN: 0006-2960 CODEN: BICHAW
CY United States
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
LA English
AB The native 140,000 molecular weight nerve growth factor protein from the mouse submaxillary gland (7S NGF(n)) is a multisubunit zinc metalloprotein which regulates the differentiation of sensory and sympathetic ganglia in vivo. The 7S NGF(n) oligomer contains a masked trypsin-like proteolytic activity which is activated by the sequestering and removal of the 7S NGF(n)-bound zinc ions by divalent metal-ion chelators. The proteolytic activity of the oligomer is associated with the γ subunit, while growth activity resides with the β subunit. In this study, the susceptibility of the proteolytic activity to inhibition by seven protein protease inhibitors, the basic trypsin inhibitor from bovine pancreas (PTI), soybean trypsin inhibitor, lima bean trypsin inhibitor, ovomucoid, human .alpha.(1)-anti-trypsin,
human antithrombin III, and human C-1 esterase inhibitor, has been investigated. Of these inhibitors, only PTI is an inhibitor for the proteolytic ctivity. By the use of sucrose density gradient sedimentation, isoelectric focusing gel electrophoresis, gel filtration, equilibrium sedimentation, and protease activity studies we have established that PTI does not react with 7S NGF(n); however, PTI undergoes rapid, stoichiometric reactions with both the EDTA-activated 7S NGF species (7S NGF(a)) and with the isolated γ subunit. Reaction of PTI with 7S NGF(a) results in the inhibition of the proteolytic activity and the dissociation of the 7S oligomer to a mixture of the α and β subunits and the γ subunit-PTI complex. In contrast to the reaction of NGF(a) with PTI, the reaction of a low-molecular-weight substrate, a-N-benzoyl-L-argininamide, does not alter the state of aggregation of the 7S oligomer.

L3 ANSWER 18 OF 22 EMBASE
AN 1977036264 EMBASE
TI A neutral collagenase from human gastric mucosa.
AU Woolley, D.E.; Tucker, J.S.; Green, G.; Evanson, J.M.

CS Univ. Dept. Med., Univ. Hosp. South Manchester, Manchester, United Kingdom .
SO Biochemical Journal, (1976) Vol. 153, No. 1, pp. 119-126. ISSN: 0264-6021 CODEN: BIJOAK
DT Journal; Article
FS 029 Clinical and Experimental Biochemistry
LA English
AB Biopsy specimens of human gastric mucosa, maintained in culture for 7 days in the absence of serum, released a collagen degrading enzyme into the medium. The yield of active enzyme reached a maximum after 2-3 days, and viable tissue, capable of protein synthesis, was essential for its production. At 25°C the enzyme attacked undenatured collagen in solution, resulting in a 55% loss of specific viscosity and producing the two products TC(A) and TC(B) characteristic of neutral collagenase action. Electron microscopy of segment long spacing crystallites of these reaction products showed the exact cleavage locus of the collagen molecule to be between bands 43 and 44 (I-43). The larger TC(A) and smaller TC(B) products were fragments representing 77 and 23% respectively of the length of the collagen molecule. Optimal enzyme activity was observed over the pH range 7.5-8.5 and a mol. weight of approx. 38000 was derived from gel filtration studies. The enzyme was shown to be inhibited by the human serum proteins $\alpha(2)$ macroglobulin and a smaller component of mol.weight approx. 40000; .alpha.(1) anti trypsin was not inhibitory. EDTA, 1,10 phenanthroline, cysteine and dithiothreitol all inhibited collagenase activity. The gastric enzyme has properties similar to other well characterized collagenases, but differences exist with respect to its molecular size and the site of attack on the collagen molecule.

L3 ANSWER 19 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1976:70571 BIOSIS
DN PREV197612070571; BR12:70571
TI COLLAGENASE INHIBITORS RATIONALE FOR THEIR USE IN TREATING CORNEAL ULCERATION.
AU BERMAN M B
SO (1975) pp. 49-66. PAVAN-LANGSTON, DEBORAH (ED.). INTERNATIONAL OPHTHALMOLOGY CLINICS, VOL. 15, NO. 4. OCULAR VIRAL DISEASE. XII+275P. ILLUS. LITTLE, BROWN AND COMPANY: BOSTON, MASS., U.S.A.
DT Book
FS BR
LA Unavailable

L3 ANSWER 20 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1976:106134 BIOSIS
DN PREV197661006134; BA61:6134
TI INTRA CELLULAR DISTRIBUTION OF NEUTRAL PROTEINASES AND INHIBITORS IN PIG LEUKOCYTES ISOLATION OF 2 INHIBITORS OF NEUTRAL PROTEINASES.
AU KOPITAR M; LEBEZ D
SO European Journal of Biochemistry, (1975) Vol. 56, No. 2, pp. 571-582. CODEN: EJBCAI. ISSN: 0014-2956.
DT Article
FS BA
LA Unavailable

L3 ANSWER 21 OF 22 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 1975:89030 BIOSIS
DN PREV197511089030; BR11:89030
TI CORD BLOOD ALPHA-1 ANTI TRYPSIN

AMNIOTIC FLUID SURFACTANT AND THE RESPIRATORY DISTRESS SYNDROME.
AU THIBEAULT D W; SINGER A D; HEINER D C; HOBEL C J
SO Pediatric Research, (1975) Vol. 9, No. 4, pp. 401.
CODEN: PEREBL. ISSN: 0031-3998.
DT Article
FS BR
LA Unavailable

L3 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1958:93312 CAPLUS
DN 52:93312
OREF 52:16463e-h
TI Trypsin inhibitors of human serum. I. Standardization mechanism of reaction and normal values
AU Bundy, Hallie F.; Mehl, John W.
CS Univ. of Southern California, Los Angeles
SO Journal of Clinical Investigation (1958), 37, 947-55
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA Unavailable
AB The Kunitz casein method for measuring trypsin activity (C.A. 41, 4523h) was modified by increasing the substrate concentration and changing the conditions for precipitating the undigested substrate The modifications result in zero-order kinetics. The measurement of trypsin inhibitor activity in serum was examined for the purpose of standardization. During the required preincubation of inhibitor and trypsin at pH 7.6, there is a loss of trypsin activity which is initially rapid, but becomes essentially zero after 15-20 min. The presence of Ca++ decreases the rate of decay but does not afford complete protection. The decrease in trypsin activity during preincubation produces an equivalent decrease in the amount of trypsin available for combination with both serum trypsin inhibitors, as judged by the behavior with or without added Ca++. In the presence of ethylenediaminetetraacetate (EDTA) the specific enzymic activity of the trypsin may be further reduced, but this does not result in a comparable reduction in the amount of trypsin apparently able to combine with either serum or soybean inhibitor. The results suggest that the soundest basis for standardization of trypsin inhibitor values in serums is the assumption that the amount of trypsin available for binding is the same as that which combines with crystalline soybean inhibitor under the same conditions employed in measuring the serum inhibitor. The inhibition of trypsin by human serum is reversible, which is important in determining serum trypsin inhibitor levels. A dissociation constant of 8 + 10-10M has been calculated for the trypsin inhibitor complex. It was found that 1 cc. of normal serum will inhibit 1.03 ± 0.13 mg. of trypsin. 22 references.